WE CLAIM:

1. A chimeric fatty body-pro-GRF analog with increased biological potency, of the following general formula:

A1-A2-Asp-Ala-Ile-Phe-Thr-A8-Ser-Tyr-Arg-Lys-
Val-Leu-A15-Gln-Leu-A18-Ala-Arg-Lys-Leu-Leu-
A24-Asp-Ile-A27-A28-Arg-A30-R_0

wherein,

A1 is Tyr or His;
A2 is Val or Ala;
A8 is Asn or Ser;
A15 is Ala or Gly;
A24 is Gln or His;
A27 is Met, Ile or Nle;
A28 is Ser or Asp;
A30 is any amino acid sequence of 1 to 15 residues;
R_0 is NH_2;

wherein A1 is N- or O-anchored by a hydrophobic tail of the following general formula I:

$$R_4\text{-}(Z)_h\text{-}(CH)_g\text{-}(W'=Y')_f\text{-}(CH)_e\text{-}(W=Y)_d\text{-}(CH)_c\text{-}(X)_b\text{-}(G)_a\text{-} \quad \text{I}$$

(R_3 on the (CH)$_g$ group; R_2 on the (CH)$_e$ group; R_1 on the (CH)$_c$ group)

wherein,

G is a carbonyl, a phosphonyl, a sulfuryl or a sulfinyl group;
X is a oxygen atom, sulfur atom or an amino group (NH);
(W=Y) represents cis or trans (CH=CR_5);
(W'=Y') represents cis or trans (CH=CR_6);
Z is an oxygen or a sulfur atom;

R_1, R_2 and R_3, independently, are selected from a hydroxyl group, a hydrogen atom, and a linear or branched C_1-C_6 alkyl group;
R_4 is an hydroxyl group, a hydrogen atom or a linear or branched C_5-C_9 alkyl group;
R_5 and R_6, independently, are a hydrogen atom or a linear or branched C_1-C_4 alkyl group;
a is 0 or 1;
b is 0 or 1;
c is o to 8;
d is 0 or 1;
e is 0 to 8;
f is 0 or 1;
g is 0 to 8;
h is 0 to 1;

wherein the sum of a, b, c, d, e, f, g and h is such that the hydrophobic tail of formula I has a linear main chain of between 5 and 8 atoms (C, O and/or S).

2. The chimeric fatty body-pro-GRF analog of claim 1, wherein A1 is Tyr or His N-alpha anchored by hydrophobic tail of formula I, wherein both a and b= 1; ~~each of d, f~~ and h= 0; G= carbonyl; X= oxygen atom; R_1, R_2, R_3, R_4= hydrogen atom and the sum c + e + g= ~~3, 4, 5 or 6.~~

3. The chimeric fatty body-pro-GRF analog of claim 1, wherein A1 is Tyr or His N-alpha anchored by hydrophobic tail of formula I, wherein a= 1; ~~each of b, d, f~~ and h= 0; G= carbonyl; R_1, R_2, R_3 and R_4= hydroxyl group and the sum c + e + g= ~~4, 5, 6 or 7.~~

4. The chimeric fatty body-pro-GRF analog of claim 1, wherein A1 is Tyr or His N-alpha anchored by hydrophobic tail of formula I, wherein a= 1; each of b and

h= 0; the sum d + f= 1; G= carbonyl; R_1, R_2, R_3 and R_4= hydrogen atom and the sum c + e + g= 2, 3, 4 or 5.

5. The chimeric fatty body-pro-GRF analog of claim 4, wherein c is 0.

6. The chimeric fatty body-pro-GRF analog of claim 5, wherein A30 is Gln-Gln-Gly-Glu-Ser-Asn-Gln-Glu-Arg-Gly-Ala-Arg-Ala-Arg-Leu.

7. The chimeric fatty body-pro-GRF analog of claim 6, wherein R_0 is NH_2.

8. The chimeric fatty body-pro-GRF analog of claim 7, of the formula *cis*CH_3-CH_2-CH=CH-CH_2-CO-Tyr-Ala-Asp-Ala-Ile-Phe-Thr-Asn-Ser-Tyr-Arg-Lys-Val-Leu-Gly-Gln-Leu-Ser-Ala-Arg-Lys-Leu-Leu-Gln-Asp-Ile-Met-Ser-Arg-Gln-Gln-Gly-Glu-Ser-Asn-Gln-Glu-Arg-Gly-Ala-Arg-Ala-Arg-Leu-NH_2 or *trans*CH_3-CH_2-CH=CH-CH_2-CO-Tyr-Ala-Asp-Ala-Ile-Phe-Thr-Asn-Ser-Tyr-Arg-Lys-Val-Leu-Gly-Gln-Leu-Ser-Ala-Arg-Lys-Leu-Leu-Gln-Asp-Ile-Met-Ser-Arg-Gln-Gln-Gly-Glu-Ser-Asn-Gln-Glu-Arg-Gly-Ala-Arg-Ala-Arg-Leu-NH_2.

9. The chimeric fatty body-pro-GRF analog of claim 1, wherein A1 is Tyr or His N-alpha anchored by hydrophobic tail of formula I, wherein a= 1; each of b and h= 0; the sum d + f= 2; G= carbonyl; R_1, R_2, R_3 and R_4= hydrogen atom and the sum c + e + g= 0, 1, 2 or 3.

10. The chimeric fatty body-pro-GRF analog of claim 1, wherein A1 is Tyr or His N-alpha anchored by hydrophobic tail of formula I, wherein a= 1; each of b, h, d and f= 0; G= carbonyl; R_1, R_2, R_3 and R_4= hydrogen atom; and the sum c + e + g= 4, 5, 6 or 7.

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11. A pharmaceutical formulation for inducing growth hormone release which comprises as an active ingredient a GRF analog as claimed in claim 1, in association with a pharmaceutically acceptable carrier, excipient or diluent.

12. A method of increasing the level of growth hormone in a patient which comprises administering to said patient an effective amount of a GRF analog as claimed in claim 1.

13. A method for the diagnosis of growth hormone deficiencies in patients, which comprises administering to said patient a GRF analog as claimed in claim 1 and measuring the growth hormone response.

14. A method for the treatment of pituitary dwarfism or growth retardation in a patient, which comprises administering to said patient an effective amount of a GRF analog as claimed in claim 1.

15. A method for the treatment of wound or bone healing in a patient, which comprises administering to said patient an effective amount of a GRF analog as claimed in claim 1.

16. A method for the treatment of osteoporosis in a patient, which comprises administering to said patient an effective amount of a GRF analog as claimed in claim 1.

17. A method for improving protein anabolism in human or animal, which comprises administering to said

human or animal an effective amount of a GRF analog as claimed in claim 1.

18. A method for inducing a lipolytic effect in human or animal inflicted with clinical obesity, which comprises administering to said human or animal an effective amount of a GRF analog as claimed in claim 1.

19. A method for the overall upgrading of somatroph function in human or animal, which comprises administering to said human or animal an effective amount of a GRF analog as claimed in claim 1.